

IN THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

1. (Previously Presented) An indoor air quality module comprising:
a compartment having an inlet and an outlet;
a monolith located between the inlet and the outlet;
a photocatalytic coating on the monolith;
an ultraviolet light source which directs ultraviolet light towards the photocatalytic coating; and
a shield positioned on an opposite side of the monolith from the ultraviolet light source, wherein the shield includes a planar portion, the monolith defines a monolith height, the shield defines a shield height, and the shield height is less than the monolith height..
2. (Original) The module as recited in claim 1 wherein the shield reflects the ultraviolet light that passes through the monolith towards the monolith to minimize leakage of the ultraviolet light from the module.
3. (Original) The module as recited in claim 1 wherein the photocatalytic coating is titanium dioxide.
4. (Original) The module as recited in claim 1 wherein the monolith comprises a honeycomb.
5. (Original) The module as recited in claim 4 wherein the honeycomb comprises a plurality of hexagonal shaped passages coated with the photocatalytic coating.
6. (Original) The module as recited in claim 1 wherein the shield comprises a sheet metal.
7. (Original) The module as recited in claim 1 wherein the shield has an upper edge and an opposing lower edge.

8. (Original) The module as recited in claim 7 wherein an upper gap is defined between the upper edge and the compartment and a lower gap is defined between the opposing lower edge and the compartment.

9. (Original) The module as recited in claim 8 wherein the upper gap has an upper gap height and the lower gap has a lower gap height, and the upper gap height is substantially equal to the lower gap height.

10. (Original) The module as recited in claim 1 wherein the monolith comprises a first monolith and a second monolith, the ultraviolet light source located between the first monolith and the second monolith.

11. (Cancelled)

12. (Original) The module as recited in claim 11 wherein a distance is defined between the ultraviolet light source and the shield and a non-reflection angle is defined as a maximum angle from a horizontal that the ultraviolet light can pass through the monolith without contacting the monolith, and wherein the shield height relates to the distance and the non-reflection angle.

13. (Previously Presented) The module as recited in claim 12 wherein the shield height is defined by a variable H, the distance is defined by the variable D, and the non-reflection angle is defined by the variable α , and the shield height is determined by the following equation:

$$H = 2 * D * \tan(\alpha)$$

14. (Previously Presented) An indoor air quality module comprising:
- a compartment having an inlet and an outlet;
 - a first monolith located between the inlet and the outlet of the compartment and having a monolith height;
 - a second monolith located between the inlet and the outlet of the compartment and having the monolith height;
 - a photocatalytic coating on the first monolith and the second monolith;
 - an ultraviolet light source adjacent the first monolith and the second monolith which directs ultraviolet light towards the photocatalytic coating;
 - a first shield having a shield height less than the monolith height, wherein the first shield includes a planar portion; and
 - a second shield having the shield height and the planar portion,
- wherein the first monolith and the second monolith are located between the first shield and the second shield, the first shield reflects the ultraviolet light that passes through the first monolith towards the first monolith to minimize leakage of the ultraviolet light from the module, and the second shield reflects the ultraviolet light that passes through the second monolith towards the second monolith to minimize leakage of the ultraviolet light from the module.
15. (Original) The module as recited in claim 14 wherein the shield comprises an upper edge and an opposing lower edge, and an upper gap is defined between the upper edge and the compartment and a lower gap is defined between the opposing lower edge and the compartment, and wherein the upper gap has an upper gap height and the lower gap has a lower gap height, and the upper gap height is substantially equal to the lower gap height.

16. (Original) The module as recited in claim 14 wherein a first distance is defined between the ultraviolet light source and the first shield and a second distance is defined between the ultraviolet light source and the second shield, and a non-reflection angle is defined as a maximum angle from a horizontal that the ultraviolet light can pass through the first monolith and the second monolith without contacting the first monolith and the second monolith, and wherein the shield height of the first shield depends on the first distance and the non-reflection angle and the shield height of the second shield depends on the second distance and the non-reflection angle.

17-20. (Cancelled)

21. (Previously Presented) The module as recited in claim 1 wherein the shield defines an outer perimeter, and the shield is continuous such that air does not pass through the shield within the outer perimeter of the shield.

22. (Previously Presented) The module as recited in claim 1 wherein the monolith and the shield are substantially parallel.

23. (Previously Presented) The module as recited in claim 1 wherein the shield and the ultraviolet light source are substantially parallel.

24. (Previously Presented) The module as recited in claim 1 wherein the shield includes a first edge and a second edge that are substantially parallel and a third edge and a fourth edge that are substantially parallel, the height is defined between the third edge and the fourth edge, the first edge and the second edge are connected to the compartment with a fastener, and a space is defined between each of the third edge and the fourth edge and the compartment.

25. (Previously Presented) The module as recited in claim 14 wherein the shield defines an outer perimeter, and the shield is continuous such that air does not pass through the shield within the outer perimeter of the shield.

26. (Previously Presented) The module as recited in claim 14 wherein the monoliths and the shields are substantially parallel.

27. (Previously Presented) The module as recited in claim 14 wherein the shields and the ultraviolet light source are substantially parallel.

28. (Previously Presented) The module as recited in claim 14 wherein the shield includes a first edge and a second edge that are substantially parallel and a third edge and a fourth edge that are substantially parallel, the height is defined between the third edge and the fourth edge, the first edge and the second edge are connected to the compartment with a fastener, and a space is defined between each of the third edge and the fourth edge and the compartment.

29. (Previously Presented) The module as recited in claim 14 wherein the ultraviolet light source is located between the monoliths.